MBGIE 2005

The Joint and Combined Multi-Battle Group Inport Exercise achieves new level of excellence in wargaming simulation

By Sharon Anderson

U.S. Navy and UK-coalition forces reached a new dimension in virtual wargaming around the globe when they replicated a composite warfighting scenario, Feb. 7-11, 2005, during the Joint and Combined Multi-Battle Group Inport Exercise (MBGIE). This was the first time joint (Army and Air Force) and coalition forces used the Navy's Continuous Training Environment infrastructure and Joint Forces Command's Joint Training and Experimentation Network for training.

The NCTE and JTEN enabled real-time battle simulation aboard ships and with Air Force and Army training simulators. The Joint Semi-Automated Forces and Battle Force Tactical Training systems realistically simulated at-sea warfighting conditions.

The 56-hour virtual exercise duplicated all the fierce intensity of warfare attaining an unprecedented level of reality in wargaming simulation, according to Capt. Mark Nesselrode, commanding officer of the Tactical Training Group Atlantic (TACTRAGRULANT) in Dam Neck, Va.

"It was a new experience for everyone involved. For example, in previous simulations, if someone ran out of fuel, that was OK, they could stay in the game. But in this exercise, people had to watch their fuel and speed. If they began to run low, we could restrict their speed, and they had to tell us how they were going to refuel to stay in the game," said Nesselrode.

Forces participating in the exercise included: in Norfolk, Va., Kearsarge Expeditionary Strike Group staff, embarked in USS Kearsarge; U.K. Marine Forces, representing the UK battle staff, embarked in USS Kearsarge; USS Anzio (CG 68); USS Roosevelt (DDG 80); USS Kearsarge (LHD 3); USS Ashland (LSD 48); USS Ponce (LPD 15); USS Normandy (CG 60); USS Gonzalez (DDG 66); USS Kauffman (FFG 59); USS Mitscher (DDG 57); USS Mahan (DDG 72); USS Hawes (FFG 53); USS Scranton (SSN 756); in Mayport, Fla., USS John F. Kennedy (CV 67); in Tinker, Ok., Air Force 552nd Operation Support Squadron; in Niantic, Conn., Air Force 103rd Air Control Squadron; in Ft. Bliss, Texas, Army 31st Air Defense Artillery Brigade; and UK-coalition forces in Portsmouth, England, HMS Edinburgh and HMS Westminster.

UK Royal Navy Lt. Cmdr. Alasdair Ireland, staff operations officer for the UK maritime battle staff said the value of virtual training is centered in the opportunity to ensure seamless interoperability between partners — before a crisis occurs.

"This was the first time that our simulations have been integrated, and it has given us a higher level of understanding of how to work together," Ireland said.

Norfolk, Va. (Feb. 9, 2005) - United Kingdom Royal Navy Lt. Cmdr. James Buck, representing the UK battle staff embarked aboard the USS Kearsarge (LHD 3), participates in the MBGIE. U.S. Navy photo by Photographer's Mate 2nd Class Greg Roberts.

According to Capt. Nesselrode, having British naval commanders participating provided valuable insight into the UK's rules of engagement.

"In the past, we would just act as if British forces were doing a certain part of the scenario, but it didn't happen that way in this exercise. We had to work within the UK's naval warfighting doctrine," said Nesselrode.

The MBGIE scenario encompassed continuous wartime planning and execution and allowed participants the opportunity to train at all levels. It promoted coordination between warfare commanders, executed joint and combined battle force operations, and familiarized crews with real-time joint and combined operations in both a high-tension and combat environment.

On the Kearsarge, watchstanders in the combat information center (CIC) and flag plot room were deeply engaged in the battle rhythm of the interactive scenario. Lt. Cmdr. Sean Anderson, assistant operations officer, and training and readiness officer, said the simulation duplicated the feeling of being underway.

"We are using SIPRNET, which is for U.S. forces only, datalinks, Voice over Internet Protocol (VoIP), radio circuits, chat, satellite communications and the Combined Enterprise Regional Information Exchange System (CENTRIXS) to communicate with the UK — the same networks and communications we would use in real combat," said Anderson.

It took two weeks to install the complex simulation technology on the USS Kearsarge, but the training benefits were enormous, according to Capt. Edward Barfield, commodore for Amphibious Squadron 8.

"Virtual training is cost effective and saves valuable time," said Barfield. "What is unique about MBGIE is that our joint and coalition forces were geographically dispersed worldwide. With the level of sophistication of this technology, we had all the urgency and reality of real combat. The systems we used are exactly the same systems we would use in warfare."

Expeditionary Strike Group Training involves the tactical operational levels of war. The commodore and Marine Expeditionary Unit (MEU) commander ensure their staffs' ability to utilize the organic forces of the ESG and collaborate effectively with other naval forces, joint forces and coalition partners. To achieve the high performance capabilities envisioned for the ESG more complex training is required.

Another advantage of simulation training involves a quality of life benefit for Sailors: Personnel do not have to leave home. On the Kearsarge (which deployed in support of the global war on terror in March), Operations Specialist 1st Class (SW/AW) Chris Shields said virtual training gives him more time with his family.

"In the past, to get this level of training the ship would deploy for three weeks, but with simulation training we can get the same training and not have to leave port," said Shields.

Results and training effectiveness were measured at TACTRAGRULANT's impressive 15,000 square-foot modeling and simulation facility. Three huge screens dominated the Tactical Floor and a changing, highly charged staff of about 25 monitored the events of the exercise. In contrast to the quiet intensity of the watchstanders on the Kearsarge, the Tactical Floor seethed with excitement as evaluators responded to the events of the exercise.

According to Capt. Nesselrode, there were 1,350 individual simulations conducted over 56 hours of game play with unique metrics applied to each event.

"Each event was built into a scenario that played over a geographic area that stretched from Jacksonville, Fla., to Norfolk, Va., inland as far as Tennessee, and out to about 300 miles at sea," Nesselrode said. "This scenario provided a back drop for four different Strike Groups under evaluation."

On the Tactical Floor, TACTRAGRULANT's Cmdr. Tom Pieluszczak, Joint Force Air Component Commander (JFACC) Module Head, and Cmdr. Al Kohnle, Modeling & Simulation Department Head, said watchstanders and battle commanders responded to the same types of scenarios that they would encounter in real warfare.

About 75 percent of ship combat operations can be reproduced synthetically, according to Pieluszczak. "But there is about 25 percent that can't be simulated. You can simulate Tomahawk strikes and the Anzio can track the missiles on radar. Real mistakes can even be made in simulation, but some things, like certain ship movements or tactical manuevers can't be duplicated," said Pieluszczak.

The combat information center (CIC) aboard the USS Kearsarge. The 56-hour virtual exercise duplicated all the fierce intensity of warfare achieving an unprecedented level of reality in wargaming simulation. The simulation had an "underway feel" without pulling up anchor, according to Capt. Edward Barfield, commodore for Amphibious Squadron 8.

Capt. Allyson Caddell, Joint Force Air Component Commander (JFACC) and Capt. Mark Nesselrode, commanding officer TACTRAGRULANT on the Tactical Floor at TACTRAGRULANT where MBGIE results and training effectiveness were measured.

Participants received immediate feedback on each completed event.

"We used a spreadsheet for evaluation. There was also room for editorial comments to further explain results. We saw what went

well and what we needed to do better," said Nesselrode, "and if we saw something that we are not getting right, we know we have to improve training."

Capt. Allyson Caddell, JFACC, said that if an event does not go as planned after several attempts, it means that training thus far has not been effective. "It doesn't mean the watchstanders or ESGs did something wrong; it's a clear signal to us that we didn't provide the right training, and we have to fix that," Caddell said.

"We can currently capture about 280 different Navy Tactical Tasks, with about 950 individual measurements for a Strike Group," said Nesselrode. "Air wing operations were also measured, and there were about 400 specific tasks that were evaluated. We targeted 236 of these tasks for the Kearsarge ESG evaluation. Since an ESG has a far different type of air component and involves a U.S. Marine Corps Expeditionary Unit, there are different tasks, and tasks that are Marine Corps-specific that we do not yet measure."

"We also evaluated the Mahan/Mitscher/Hawes Surface Strike Group (SSG), but they were evaluated against a much smaller number of tasks (approximately 80 at the present time) since they have a much narrower mission scope. Finally, we are beginning to evaluate returning Strike Groups, and we are working on the tasks that are appropriate for a group, such as the USS John F. Kennedy Strike Group while they are sustaining readiness. Eventually, we will evaluate the same number of tasks (about 280 for the SSG without its air wing) for a returning group just as we do when a Strike Group is certified to deploy," Nesselrode said.

The results of the exercise will be combined with previous evaluations for the Kearsarge ESG and then a recommendation for certification and further training requirements will be sent to Rear Adm. Reubin Bookert, Commander, Amphibious Group Two, Rear Adm. Richard Gallagher, Commander, Strike Force Training Atlantic and finally to Vice Adm. Mark Fitzgerald, Commander Second Fleet for approval.

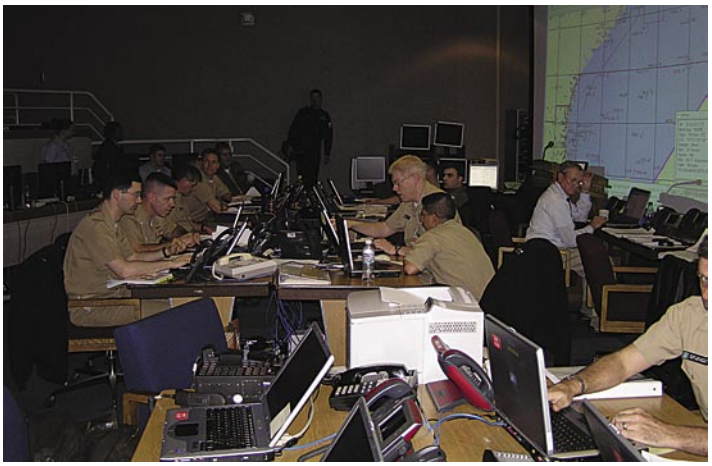
"Any recommendations for changes to the training or conduct of the exercise are also forwarded the same way," Nesselrode said.

Capt. Nesselrode explained how the metrics are evaluated against the Fleet Response Plan (FRP). The FRP provides a logical framework to successfully train Strike Groups. Each major event, whether live or synthetic, permits observation and evaluation. As a Strike Group moves from being emergency surge capable to deployable, the level of complexity of the training is increased, as is the necessity to actively integrate with and sometimes control both joint and coalition forces.

"There are metrics which apply throughout this process, some apply only in a live environment, some can only be tested in a synthetic environment, and some require the inclusion of joint and coalition forces," Nesselrode said.

The metrics for each event are tailored to either reinforce major training requirements or to capture those events that are required at each successive level of complexity. Typically, by the end of training at least 90 percent of all possible training is observed, and the ability to send a Strike Group forward, for whatever phase of the FRP is required, is well-understood.

TACTRAGRULANT's Cmdr. Tom Pieluszczak (left) JFACC Module Head and Cmdr. Al Kohnle Modeling & Simulation Department Head closely monitored MBGIE results and training effectiveness.



TACTRAGRULANT's Tactical Floor where staff monitored the progress of MBGIE participants as they responded to 1,350 individual simulations conducted over 56 hours of game play. Unique metrics were applied to each event with participants receiving immediate feedback after each event was completed.

"At the conclusion of the exercise, participants were debriefed with our immediate recommendations," said Nesselrode. "This is the same process followed for Carrier Strike Groups and now Surface Strike Groups."

Wargaming extends precious training dollars and, more importantly, saves valuable time in combat, since forces have already tested and integrated technology into the battle plan. Joint and coalition communications can be tested to ensure seamless interoperability, and joint and coalition forces will be disciplined and synchronized to respond to a multitude of global threats.

Ms. Anderson is the CHIPS senior editor. Thanks to the TACTRAGRULANT staff and Capt. Mark Nesselrode, commanding officer of TACTRAGRULANT for his invaluable assistance with this article. CHIPS